

Appl. No. : 10/521,372
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AMENDMENTS TO THE CLAIMS

Please amend Claims 6 and 9 as follows. Insertions are shown underlined while deletions are ~~struck through~~. Please cancel Claims 1-5 and 12. Please add Claims 15-16.

1-5 (canceled)

6 (currently amended): An optical fiber connecting method which comprises:

opposing two optical fiber connection components each comprising ~~each~~ (i) a connection member having one or more through-holes each for slidably guiding an optical fiber therethrough and guides each for slidably guiding a rodlike coupling member, said through-holes and said guides extending from one edge to another in a sliding direction, (ii) rodlike coupling members, and (iii) a turned square U-shaped plug having one or more through-holes or grooves each for inserting the optical fiber and guide holes each for guiding the rodlike coupling member on the bottom of the concavity of square U-shape,

wherein the optical fiber is arranged such that an end of a cladding of the optical fiber placed in the through-hole of the connection member is located to an edge of the connection member, and the optical fiber is fixed to the turned square U-shaped plug,

said connection member is arranged slidably in said plug by installed in the concavity of square U-shape of said plug by means of each rodlike coupling member inserted in both said plug and said connection member in such a state that the optical fibers are inserted respectively in said through-holes for optical fiber,

bringing the through-holes of both connection members face to face with each other, and

sliding said connection members together in a direction of the center axis of the optical fibers along the rodlike coupling members guided by the guides, so that the optical fibers are connected in the through-hole of one of the connection members.

7 (original): The optical fiber connecting method according to Claim 6 wherein optical fibers inserted respectively in the through-holes of the connection members are fixed to the plugs by an adhesive.

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8 (original): The optical fiber connecting method according to Claim 6 which comprises attaching said two optical fiber connection components to an adapter and bringing the through-holes of them face to face each other.

9 (currently amended): An optical fiber connection structure which is formed by

opposing two optical fiber connection components each comprising ~~each~~ (i) a connection member having one or more through-holes each for slidably guiding an optical fiber therethrough and guides each for slidably guiding a rodlike coupling member, said through-holes and said guides extending from one edge to another in a sliding direction, (ii) rodlike coupling members, and (iii) a turned square U-shaped plug having one or more through-holes or grooves each for inserting the optical fiber and guide holes each for guiding the rodlike coupling member on the bottom of the concavity of square U-shape,

wherein the optical fiber is arranged such that an end of a cladding of the optical fiber placed in the through-hole of the connection member is located to an edge of the connection member, and the optical fiber is fixed to the turned square U-shaped plug,

said connection member is arranged slidably in said plug by being installed in the concavity of square U-shape of said plug by means of each rodlike coupling member inserted in both said plug and said connection member, in such a state that the optical fibers are inserted respectively in said through-holes for the optical fibers,

bringing the through-holes of both connection members face to face with each other, and

sliding said connection members together in a direction of the center axis of the optical fibers along the rodlike coupling members guided by the guides, so that the optical fibers are connected in the through-hole of one of the connection members.

10 (original): The optical fiber connection structure according to Claim 9 wherein a refractive index matching agent is used for connecting the optical fibers.

11 (original): The optical fiber connection structure according to Claim 9 wherein the optical fiber connection component is fixed to an adapter.

12 (canceled)

13 (previously presented): The optical fiber connecting method according to Claim 6, wherein the guides of the connection member are provided at or near both side edges with respect to the sliding direction.

14 (previously presented): The optical fiber connection structure according to Claim 9, wherein the guides of the connection member are provided at or near both side edges with respect to the sliding direction.

15 (new): A method of connecting optical fibers comprising:

providing two optical fiber connection components, each comprising:

a connection member having (i) one or more through-holes each for slidably guiding an optical fiber therethrough and (ii) guides each for slidably guiding a rodlike coupling member, said through-holes and said guides extending from one edge to another in a sliding direction;

a turned square U-shaped plug having a bottom portion and two side portions, wherein the connection member is positioned between the two side portions, said bottom portion having (I) one or more through-holes or grooves each for inserting the optical fiber and (II) guide holes each for guiding the rodlike coupling member;

rodlike coupling members inserted into the respective guides of the connection member through the respective guide holes of the turned square U-shaped plug; and

an optical fiber or optical fibers each inserted into each through-hole of the connection member through each through-hole or groove of the turned square U-shaped plug, wherein an end of a cladding of the optical fiber is leveled with an edge of the connection member and the optical fiber is fixed to the turned square U-shaped plug;

opposing and contacting the two optical fiber connection components facing the edge of each connection member to align the rodlike coupling members and the optical fiber(s) of the two optical fiber connection components, wherein the ends of the respective optical fibers are connected; and

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sliding the connection members together in the sliding direction toward one of the bottom of the turned square U-shaped plug along the rodlike coupling members guided by the guides so that the connected ends of the optical fibers are located inside the through-hole of one of the connection members.

16 (new): The method according to claim 15, wherein the two optical fiber connection components have identical configurations.